

Copper shall conduct the following tasks associated with the Contingency Water Treatment System Engineering and Setup/Startup Support scope of work:

1. Equipment and Sourcing Evaluation – Copper shall conduct an evaluation of the existing treatment system equipment at the American Tunnel for its feasibility to be used as part of a Contingency Water Treatment System. Copper shall also evaluate new or used equipment (lease or purchase options) for feasibility to be used as part of a Contingency Water Treatment System. It is assumed that the Contingency Water Treatment System would be setup/constructed in the general area of the existing American Tunnel treatment system and would deliver pH adjusted water with potentially other settling agents to settling ponds currently being constructed near the existing American Tunnel location. Copper shall also evaluate the various vendor sources and delivery schedule associated with any new or lease equipment.
2. Preliminary Design and Field Engineering – Copper shall develop preliminary process flow diagram (PFD) and preliminary Piping and Instrumentation Diagram (P&ID) for EPA's consideration in constructing a Contingency Water Treatment System. Copper shall provide additional field engineering support at the request of EPA. This task may also include development of ideas/preliminary engineering necessary to rapidly implement lime addition at this location.
3. Treatability Testing – Copper shall conduct office based analysis of the following treatment characteristics that may affect water treatment of the Gold King water:
  - a. Amount of lime used and amount of solids generated at various pH setpoints;
  - b. Identification of possible flocculants to use at lower pH setpoints and moderate pH setpoints; and
  - c. Preliminary analysis of metal removal effectiveness at a range of pH endpoints (please note that this analysis will only provide an approximation of metals removal given the difference between field and laboratory conditions and the nature and age of the influent sample used for testing).
4. Treatment System Setup and Startup Support – Copper shall provide office and field based personnel to provide technical support during the setup and commissioning of the Contingency Water Treatment System. This proposal assumes that two Copper personnel shall visit the site during system setup for one week.